

**Appl. No. 09/919,994**  
**Amdt. dated May 17, 2007**  
**Reply to Office Action of March 29, 2007**

**Amendments to the Claims:**

Listing of Claims:

1 - 33 (Canceled)

34. (New) A process for reducing the amount of residual diphenylmethane diisocyanate monomer in a polyurethane prepolymer reaction product comprising the steps of:

(A) dissolving diphenylmethane diisocyanate monomer in one or more inert solvents, said solvent or solvents being selected from the group consisting of solvents having a boiling point about 1°C to about 100°C below the boiling point of the diphenylmethane diisocyanate monomer at a pressure of 10 torr, wherein the weight ratio of the inert solvent or solvents to the diphenylmethane diisocyanate monomer ranges from about 75:25 to about 35:65,

(B) adding at least one polyol to a stoichiometric excess of the dissolved diphenylmethane diisocyanate monomer at an NCO:OH ratio in the range of from about 2:1 to 20:1,

(C) reacting said polyol(s) with said dissolved diphenylmethane diisocyanate monomer to form a mixture comprising polyurethane prepolymer reaction product, unreacted diphenylmethane diisocyanate, and the inert solvent or solvents from step (A), and

(D) distilling the mixture comprising polyurethane prepolymer reaction product, unreacted diphenylmethane diisocyanate, and the inert solvent of solvents from step (A) to strip the unreacted diphenylmethane diisocyanate to a level less than 0.3% by weight based on

the combined weight of prepolymer, residual monomer, and residual inert solvent or solvents, wherein the inert solvent or solvents comprise about 5% to about 85% by weight of the total weight of the combination of the mixture for forming the prepolymer reaction product plus solvents.

35. (New) The process of claim 34 wherein the monomeric diphenylmethane diisocyanate is at least one isomer of diphenylmethane diisocyanate.

36. (New) The process of claim 35 wherein the inert solvent or solvents are selected from the group consisting of organic aromatic esters, aliphatic esters, and mixtures thereof having boiling points in the range of from about 115°C to about 214°C at 10 torr.

37. (New) The process of claim 35 wherein the distillation step comprises at least three agitated film vacuum distillation stages in series, each at an evaporative temperature of up to 150°C.

38. (New) The process of claim 34 wherein the prepolymer contains less than 0.1% by weight of unreacted diphenylmethane diisocyanate monomer based on the combined weight of prepolymer, residual monomer, and residual inert solvent or solvents after stripping.

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39. (New) The process of claim 34 wherein the prepolymer contains less than 0.05% by weight of unreacted diphenylmethane diisocyanate monomer based on the combined weight of prepolymer, residual monomer, and residual inert solvent or solvents after stripping and comprises at least 80% of the theoretical NCO content for a pure ABA structure.

40. (New) The process of claim 34 wherein the polyol or polyols are selected from the group consisting of polyesters of adipic acid; polyethers of ethylene oxide, propylene oxide, or tetrahydrofuran; polycaprolactones; polycarbonates; hydrocarbon polyols; and mixtures thereof; said polyol or polyols having a number average molecular weight in the range of from about 400 to about 5000.

41. (New) The process of claim 34 wherein the polyol or polyols comprise at least one component having a low molecular weight in the range of from about 62 to about 400, and selected from the group consisting of ethylene glycol, isomers of propylene glycol, isomers of butane diol, hexanediol, trimethylolpropane, pentaerythritol, poly(tetramethylene ether) glycol, diethylene glycol, triethylene glycol, dipropylene glycol, tripropylene glycol, and mixtures thereof.

42. (New) The process of claim 41 further comprising at least one polyol having a high number average molecular weight in the range of from about 400 to about 5000.

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43. (New) The process of claim 42 wherein the molar ratio of the low molecular weight polyol to the high number average molecular weight polyol is in the range of from about 0.25 to about 2.5:1.

44. (New) The process of claim 34 wherein the inert solvent or solvents are selected from the group consisting of dimethyl phthalate, diethyl phthalate, diisobutyl adipate, and dibutyl phthalate.

45. (New) The process of claim 34 further comprising the step of adding at least one blocking agent selected from the group consisting of a ketoxime, a phenol, a lactam, or a pyrazole to the stripped prepolymer.